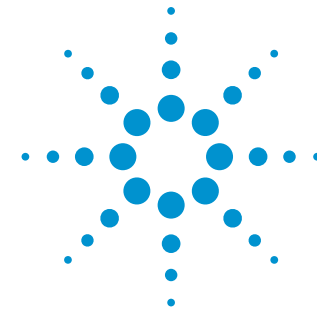


## InfiniiVision 3000 X-Series Oscilloscope



### Using the "Auto Demo" mode

Use the scope's "Auto Demo" mode to quickly demonstrate the following key features and capabilities of the oscilloscope in two easy steps without requiring an external demo board:



### Auto Demo shows

- Fast waveform update rate
- Mixed signal oscilloscope
- Serial bus decode and trigger
- Segmented memory acquisition
- Mask testing
- WaveGen function generator

### Using the "Training Signals" mode for advanced demonstrations

#### Easy CAN serial bus decode/trigger using the built-in "Training Signals"



1. Connect Channel-1 probe between the Demo1 test lug and ground lug.
2. Connect Channel-2 probe between the Demo2 test lug and ground lug.
3. Press [Default Setup] front panel key.
4. Press [Help] front panel key.
5. Press **Training Signals** softkey; then select the **CAN** signal from the softkey menu list using the **Entry** knob.
6. Press **Auto Setup** softkey.

With hardware-based decoding, this scope quickly detects the occurrence of infrequent CAN error frames. Note that it is also very easy to demonstrate other serial bus protocols. Simply select the desired Serial bus training signal, then press the Auto Setup softkey

#### Search and navigation on CAN errors

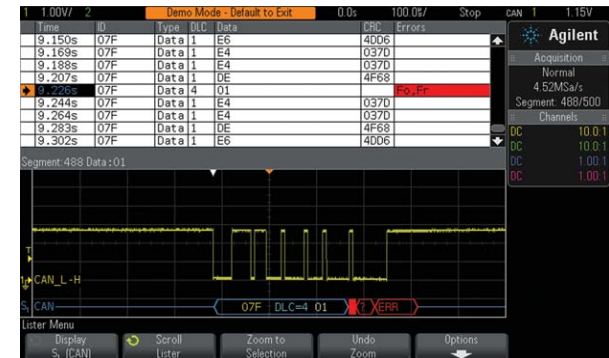


7. Press [Serial] front panel key; then, press **Lister** softkey.
8. Press **Display** softkey; then select **Serial 1 (CAN)**.
9. Set timebase to **200.0 ms/div** using **Horizontal** scale knob.
10. Press [Run/Stop] to stop acquisitions.
11. Press [Search] front panel key; then select **Serial 1 (CAN)** from the softkey menu list using **Entry** knob.
12. Press **Search for** softkey; then select **All Errors**.

The white triangles at the top of the waveform area indicate the location of each "found" CAN Error Frame. Let's now navigate to each CAN Error Frame and take a closer look at each one.

13. Press the [◀] and [▶] front panel navigation buttons to automatically navigate to each CAN Error Frame.

#### Capturing 500 consecutive CAN frames with ID = 07F using segmented memory



14. Press **Horizontal** position knob to set offset to 0 sec.
15. Set timebase to **100.0 μs/div** using **Horizontal** scale knob.
16. Press [Run/Stop] front panel key.
17. Press [Acquire] front panel key.
18. Press **Segmented** softkey; then select # of **Segments = 500** using **Entry** knob.
19. Press **Segmented** softkey to begin acquisition.
20. Press [Serial] front panel key; then press **Lister** softkey.
21. Press **Scroll Lister** softkey; then use **Entry** knob to review all 500 captured frames in the list.

Segmented memory optimizes oscilloscope acquisition memory to capture only those events that satisfy the scope's trigger condition.

# Quick Demo Guide

## Parametric violation search



1. Press [**Default Setup**] front panel key.
2. Press the [**Help**] front panel key.
3. Press the **Training Signals** softkey; then select the **Runt Pulses** from the list using the **Entry** knob.
4. Press the **Output** softkey to enable this output signal.
5. Set Channel-1 to **500 mV/div** with **+1.7V** offset using front panel Channel-1 knobs.
6. Press the **Trigger Level** knob to set triggering at **50%** of the signal amplitude.
7. Press [**Run/Stop**] front panel key.
8. Press [**Search**] front panel key; then select **Runt** from the list using the **Entry** knob.

The white triangles at the top of the display indicate the location of each “found” runt pulse. Let’s now navigate to each runt and take a closer look at each one.

9. Set timebase to **200.0 ns/div** using **Horizontal** scale knob.
10. Press the [**◀**] and [**▶**] front panel navigation buttons to automatically navigate to each positive “runt” pulse.

## Parametric violation triggering

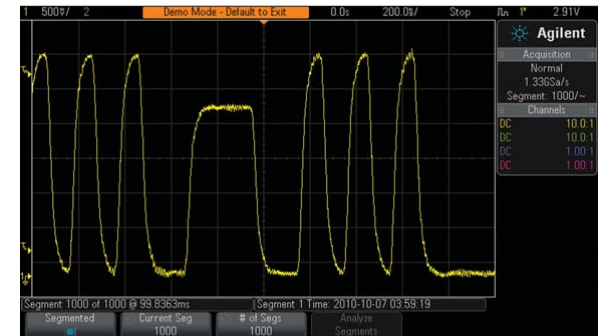


Let’s now trigger on these “runts” using the scope’s automatic “Copy Search to Trigger” feature.

11. Press the **Copy** softkey; then press **Copy to Trigger**.
12. Press the **Horizontal** position knob to set offset to 0 seconds.
13. Press [**Run/Stop**] to begin repetitive acquisitions again.

The scope is now triggering on two different positive runt pulses of different widths as shown in the screen image above. Let’s now use the scope’s segmented memory acquisition mode to efficiently capture 1,000 occurrences of these positive runt pulses into memory.

## Capturing consecutive runt pulses using segmented memory



14. Press the [**Acquire**] front panel key.
15. Press the **Segmented** softkey; then select the **# of segments = 1000** using the **Entry** knob.
16. Press **Segmented** softkey to begin acquisition.
17. Press the **Current Seg** softkey; then use **Entry** knob to review all 1000 captured segments that each contain a runt pulse.

Segmented memory optimizes oscilloscope acquisition memory to capture only the events that satisfy the scope’s trigger condition, in this case runt pulses.



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